

WHAT IS CLAIMED IS:

1. An electronic device with protection panel comprising:

5 a protection panel (100) in which a decoration layer (9) having a transparent window section (8a) is formed;

10 a casing (13) in which the protection panel is fitted into a panel fitting section (22) having an opening (17), in a manner without a gap therebetween and such that outer surfaces of the protection panel and the casing (13) are flush with each other; and

15 a display device (15) located on a lower side of the protection panel (100) and arranged so as to be visually recognizable from an outside through the transparent window section, wherein

the protection panel (100) comprises:

20 a transparent protection panel main body (1) an upper surface of which is provided with a transparent lower electrode (2) and a lower circuit (5b) provided around the transparent lower electrode so as to be covered by the decoration layer (9);

25 a movable electrode film (16) in which a transparent upper electrode (4) provided in a position opposite to the transparent lower electrode (2) in the protection panel main body (1) and an upper circuit (5a)

provided around the transparent upper electrode so as to be covered by the decoration layer are provided on a lower surface of a transparent resin film (3), and arranged on an upper side of the protection panel main body (1) via an air layer, in which peripheral portions thereof are bonded to the transparent protection panel main body (1); and

a cover film (8) which is made of transparent-resin, and is provided on an upper surface of the transparent resin film (3), and on at least one surface of which the decoration layer (9) is formed.

2. An electronic device with protection panel according to Claim 1, wherein the decoration layer (9) is formed on a lower surface of the cover film (8).

3. An electronic device with protection panel according to Claim 2, wherein the cover film (8) has the same outer dimensions as the transparent resin film (3) and the protection panel main body (1).

4. An electronic device with protection panel according to any one of Claims 1-3, wherein an upper surface of the cover film (8) is treated by hard coat processing, low reflection processing, antifouling processing, or any combination thereof.

5. A protection panel for electronic device display window comprising:

a transparent protection panel main body (1) an

upper surface of which is provided with a transparent lower electrode (2) and a lower circuit (5b) provided around the transparent lower electrode;

5 a movable electrode film (16) in which a transparent upper electrode (4) provided in a position opposite to the transparent lower electrode (2) in the protection panel main body (1) and an upper circuit (5a) provided around the transparent upper electrode (4) so as to be covered by a decoration layer (9) are provided on a
10 lower surface of a transparent resin film (3), on at least one side of which the decoration layer (9) having a transparent window section (8a) and covering the lower circuit (5b) is formed, and in which peripheral portions thereof are bonded and arranged on the transparent
15 protection panel main body (1) such that an air layer is formed on an upper side of the protection panel main body; and

a cover film (8) which is made of a transparent-resin and is provided on an upper surface of the
20 transparent resin film (3), and on at least one surface of which the decoration layer (9) is formed; whereby

the protection panel is fitted and retained in a panel fitting section (22) having an opening (17) in a casing (13), in a manner without a gap and such that outer
25 surfaces of the protection panel and the casing (13) are

flush with each other, so that a display device (15), which is located on a lower side of the protection panel and arranged so as to be visually recognizable from an outside through the transparent window section (8a), is protected.

5 6. A protection panel according to Claim 5, wherein the decoration layer (9) is formed on a lower surface of the cover film (8).

7. A protection panel according to Claim 6, wherein the cover film (8) has the same outer dimensions as
10 the transparent resin film (3) and the protection panel main body (1).

8. A protection panel according to any one of Claims 5-7, wherein an upper surface of the cover film (8) is treated by hard coat processing, low reflection
15 processing, antifouling processing, or any combination of these.

9. A method of fabricating protection panels for electronic device display window, comprising:

forming a plurality of transparent lower
20 electrodes (2) and a plurality of lower circuits (5b) provided around the transparent lower electrodes, on an upper surface of a transparent plate member (27);

forming transparent upper electrodes (4) provided in positions opposite to the transparent lower electrodes
25 (2) and upper circuits (5a) formed around the transparent

upper electrodes (4), on a lower surface of a transparent resin film (3), on at least one side of which decoration layer (9) are formed so as to mask respective lower circuits (5b), each decoration layer (9) having a
5 transparent window section (8a);

bonding the plate member (27) and the transparent resin film (3) in such a manner that peripheral portions of the transparent lower electrodes (2) and the said transparent upper electrodes (4) are bonded together while
10 an air layer is formed on an upper side of the plate member (27), and bonding a transparent-resin made cover film (8) to the transparent resin film (3) so as to bring into the transparent-resin made cover film (8) of which the decoration layers (9), each of which has the transparent
15 window section (8a) and masks each upper circuit (5a) and each lower circuit (5b), are formed on at least one surface, into an opposite of the transparent resin film (3) surface which is provided on an upper surface of said transparent resin film (3) and on which the transparent upper
20 electrodes are provided; and

cutting together the plate member (27), the transparent resin film (3), and the cover film (8) having been bonded, in an outside of the transparent lower electrodes (2) and the transparent upper electrodes (4) and
25 along an inner periphery of the decoration layer, so that

protection panels are obtained.

10. A method of fabricating protection panels for electronic device display window according to Claim 9, wherein the decoration layers (9) are formed by contacting and bonding the transparent-resin made cover film (8), of which the decoration layers (9) are constituted on at least one surface, to an opposite of the transparent resin film (3) surface which is provided on an upper surface of said transparent resin film (3) and on which the transparent upper electrodes are provided.